9585, West Gary Lighthouse Charter

PROJECT ABSTRACT

With Project: Moving Technology Forward, West Gary Lighthouse Charter School (WGLCS), located in Gary, Indiana, seeks to take our technology use to the next level and begin to more effectively and efficiently integrate technology into instructional practices and planning in core subject areas. The primary purpose of the project is to increase student proficiency rates in both English/Language Arts and Mathematics on the ISTEP by increasing engagement through the varied use of technology and increasing teacher capacity to utilize instruction effectively in the classroom.

This project will focus on enhancing the technology available for both teacher and student use at the Upper Academy (grades 4 and 8) and College Prep Academy (grade 9) and building capacity of teachers to utilize the technology in instructional practices and planning in core subject areas (ELA, Math, Science, Social Studies).

The Upper Academy will utilize ActivBoards to actively engage students in the learning of core subjects. An interactive whiteboard or IWB is a large interactive display that combines the simplicity of a whiteboard, power of a computer and front projection. Promethean interactive whiteboards engage students with vivid images, video and audio. The ActivBoard interactive whiteboard enables anything that can be seen or done on a computer screen to be projected onto an interactive whiteboard and bringing every classroom to life. ActivBoards can, if used correctly, dramatically increase student engagement. Our vision is to create a classroom where teachers are using the interactive technology to teach core subject areas, increase student engagement and, ultimately, student achievement.

In order to prepare for the College Prep Academy, opening in August 2010, the school will purchase tablet PCs for each teacher, Elmo projectors for each College Prep classroom, and we will enhance the science lab and science instruction by providing digital microscopes. All College Prep Academy students will have their own individual tablet PCs ¿ utilizing the teacher PC and the Elmo projectors will enable the teachers to actively engage students through a variety of interactive tools.

With Project: Moving Technology Forward, WGLCS is committed to providing ongoing and extensive coaching to teachers on the effective use of technology in instructional practices and planning. We realize that we must invest in increasing our teachers' capacity to use the instruction if it is truly going to have the desired impact of increasing student proficiency rates on ISTEP and reaching our goal of 75% proficiency in reading and math by spring 2011.

NEEDS/BASELINE

West Gary Lighthouse Charter School (WGLCS) currently serves 540 students in Kindergarten through Grade 9. Eighty seven percent (87%) of students participate in the free and reduced lunch program. We serve an at-risk student population. Our mission is to prepare our students for college through a rigorous, arts-infused program.

All students in grades 3-8 (380 students) will benefit from the Technology Stimulus Grant. During the 2010-2011 school year, 450 students in grades 3 - 9 will benefit.

In Spring 2009, 44.0% of students at WGLCS were proficient on the ISTEP in English/Language Arts. 52.2%% of students were proficient in Mathematics. While we have seen growth over prior years on the ISTEP, we still need to make greater gains each year in order to have all students reach proficiency.

WGLCS has made significant gains in its technological infrastructure since the infusion of Title I ARRA stimulus funds. Specifically, the current status of technology and its impact on instruction is as follows:

¿ Computers in each classroom ¿ for student use either for word processing, research, or remediation/enrichment software (varying upon grade levels)

¿ Waterford Early Reading Software ¿ for students in grades K-2

¿ ActivBoards (interactive whiteboards) being used in grades seven and eight

While we believe that we have a solid technology basis, the challenge at WGLCS at this time is to more effectively integrate the technology into instructional practices and planning in core subject areas. We believe this challenge is in large part due to a lack of high-quality, ongoing professional development that will increase teacher capacity and confidence to use the technology on a daily basis.

Currently, the use of Waterford software in grades K-2 is the only technology that is being effectively integrated into the classroom. The remaining technologies are being used on a limited basis, without consistency, throughout the school. There is a gap between the technology available and the confidence in the instructional staff to utilize the technologies available to them. We are ready to take the next step with our technology and create classrooms with a variety of interactive technological tools for teachers to use to actively engage their students.

As the school expands to ninth grade (in August, 2010) we also must equip those classrooms with interactive technology to allow teachers to plan and deliver quality, standads-based lessons utilizing the interactive technology. All students will receive tablet PCs; therefore it is imperative that all staff have tablet PCs with which to work with the students. In addition, all ninth grade classrooms will need Elmos and LCD projectors to further enable to the teachers to integrate technology into instruction.

In conclusion, we believe that we are on the right path in regards to technology. The infrastructure is solid and we have invested a significant amount of money into technology at WGLCS. Our greatest need, at this time, is to move technology forward¿ and more effectively integrate the technology into instructional practices. We have the technology ¿ now we have to use it more effectively so it has an impact on student achievement. This includes increasing teacher capacity and confidence to use the technology available to them.

GOALS/OBJECTIVES

The goals of Project: Moving Technology Forward are as follows:

(1) To increase student proficiency rate in English/Language Arts and Mathematics on the ISTEP in grades three through nine through the effective integration of technology into daily instructional practices;

(2) To increase teacher capacity to utilize technology in instructional practices and daily lesson plans; and

(3) To increase student engagement in grades three through nine through the effective integration of technology into instructional planning and practices.

Objective 1: All students will reach 75% proficiency in English/Language Arts and Math on ISTEP by spring 2011.

Measure: ISTEP

Objective 2: All teachers will include an integration of technology component into daily lesson plans.

Measure: Lesson plans, classroom observations

Measure: 95% of teachers will provide evidence of a completed that included a technology integration component.

Objective 3: All students in grades three through nine will be more engaged in the learning process.

Measure: 100% of students in grades three through nine will report higher engagement levels on student surveys.

Measure: Parent satisfaction surveys, attendance rates

Our primary objective is to increase student achievement, particularly in reading and math in order to achieve a 75% proficiency pass rate on ISTEP by Spring 2010. To do this, we must actively engage our students in the learning process. We believe Project: Moving Technology Forward will provide the necessary tools to engage our students in the learning process in English/Language Arts, Math, Social Studies and Science. But we also MUST provide our teachers with the knowledge and skill base to utilize the technology effectively and efficiently both in instructional practice and in daily planning. The technologies are a tool for teachers to use and without proper training will not be used effectively.

METHODS/ACTIVITIES

Strategy 1: Increase student engagement by creating dynamic learning environments with a variety of interactive technology in grades five through eight.

The Dynamic Learning Environment

Project: Moving Technology Forward will allow the school purchase five ActivBoards to be used in the Upper Academy. ActivBoards, by Promethean, are interactive whiteboards. An interactive whiteboard or IWB is a large interactive display that combines the simplicity of a whiteboard, power of a computer and front projection. Promethean interactive whiteboards engage students with vivid images, video and audio. The ActivBoard interactive whiteboard enables anything that can be seen or done on a computer screen to be projected onto an interactive whiteboard ¿ bringing every classroom to life. ActivBoards can, if used correctly, dramatically increase student engagement.

The College Prep Academy, which will serve student in grades nine during the 2010-2011 school year and will expand one grade each year until reaching 12th grade, needs extensive technology in order to meet our vision of creating a dynamic learning environment that prepares our College Prep Academy students to be technologically literate. Each student in the College Prep Academy will receive a tablet

PC (this is not funded through the technology stimulus grant) that they can keep after graduation. However, all teachers need tablet PCs to allow them to interact with students. Each College Prep Academy will also have an Elmo projector and LCD projector to help teachers create dynamic, interactive, and visually stimulating lessons that will keep students engaged. Finally, we will purchase 3 digital microscopes to take our science lab, and science instruction, to the next level. Students will be able to study and observe objects in a digital capacity ¿ transforming science instruction at WGLCS forever!

There are additional upgrades that need to be made, including a conversion to Microsoft 2007 so all teachers can access ActivInspire, the lesson plan suite provided by Promethean for the ActivBoards.

Strategy 2: Extensive Professional Development

While we believe that the infusion of the technologies noted above will have a significant impact on student achievement, we strongly believe this impact will be marginalized if we do not increase teacher capacity to effectively integrate technology into instruction. In fact, the inconsistency with which we are currently using the technology available to us illustrates the need for ongoing, sustained professional development.

With Project: Moving Technology Forward, we seek to provide a technology coach who will coach teachers on using technology to improve instruction. This is not a technology teacher, but rather, an expert in using technology to enhance instruction by incorporating a variety of technology into instructional planning and practice. The coach will model lessons, provide feedback to teachers, and will provide support to teachers in the development of lesson plans that incorporate technology. We believe increasing our teachers capacity to use the technology available to them is the critical lever in increasing student proficiency rates on ISTEP. This professional development component of the project is paramount to the project's success.

An example of the coaching to be provided by the technology coach is as follows: The technology coach will work with a teacher on developing a standards-based lesson using the ActivBoard. On the lesson plan template used at the school, the teacher will note what technology is being used and, more importantly, specifically HOW it will be used in the lesson. The coach will work with the teacher on accessing a variety of resources, including the flipcharts and lesson plans on ActiVision to develop a lesson that efficiently integrates technology and makes students co-equals in the instructional process.

PROFESSIONAL DEVELOPMENT

As noted above, professional development is a major component of Project: Moving Technology Forward and is a key strategy in increasing student achievement on the ISTEP in core subject areas.

Current Professional Development Needs:

-Professional development on ActivBoards

-Ongoing professional development and coaching on effectively integrating technology into instructional practices

-Increase teacher capacity for using a variety of technologies in instructional practices AND instructional planning, including tablet PCs, Elmo projectors, LCD projectors.

There is a current gap between the technology available to teachers and the knowledge base/capacity of teachers to integrate the technology into instruction. The purpose of this plan is to increase teacher capacity to bring technology to life in the classroom.

Professional Development Plan - we believe that high-quality professional development must be sustained for it to build capacity.

(1) Promethean will provide extensive training on the ActivBoard This will take place after installation of ActivBoards. A July 2009 research study conducted by Marzano Research Laboratory concluded that "...findings suggest relatively large percentile gains in student achievement under the following conditions:

- A teacher is experienced.

- A teacher has used Promethean ActivClassroom for an extended period of time.

- A teacher uses Promethean ActivClassroom extensively in the classroom but not beyond 80% of the time.

- A teacher has high confidence in his or her ability to use Promethean ActivClassroom."

This also includes training on accessing the lesson plans and flipcharts available on ActiVision, an online lesson plan/flipchart database and resource for ActivBoard users.

(2) The school will hire a technology coach to provide training to all teachers on how to effectively integrate technology into instruction. This coach will have experience with ActivBoards, but will also be able to help all teachers, at every grade level, incorporate a variety of technology into lesson plans and instructional practices. The technology coach will report to the school principal.

All professional development activities will be coordinated with the school principal and the school's Director of Instruction (DOI). The DOI provides ongoing professional development to all instructional staff on implementation of the curriculum, classroom management, and using data to drive and inform instruction. All professional development activities will be coordinated into one major professional development plan to ensure seamlessness and to minimize overlap.

The technology coach will work with teachers on the development of standards-based lessons that incorporate interactive technology, will model lessons, observe lessons and provide feedback. The coach will work with all teachers, including special education teachers. We believe this ongoing effort through June, 2011 will dramatically increase teacher capacity to use this technology effectively. The end result will be highly engaging lessons in core subject areas that will bring students into the learning process - with increased proficiency in ELA and Math as a result.

FORMATIVE/SUMMATIVE EVALUATION

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We will also review the following data sources:

-analyze student growth on our interim assessment, the NWEA MAP, to correlate student growth on NWEA and the levels to which teachers integrate technology into instruction

-teacher surveys

-classroom observations by DOI, technology, coach, and principal

-student surveys (for students in grades five through nine)

Finally, we will solicit feedback from Cambridge Education, our external evaluator, during their annual site visit, on the implementation of the project.

Throughout the project the Principal will work to evaluate the effectiveness of the various strategies - including the effectiveness of the technology coach, professional development provided by Promethean, and whether or not the professional development is, indeed, increasing teacher capacity.

LOCAL MATCH

$20,000

In order to support this project, the school will support the salary of a technology support staff member who will ensure that the technology available in the building is working and will troubleshoot technology issues.

The tech support staff member is an in-kind contribution and is necessary to maintain the technology purchases acquired through this grant. Examples of tech support in relation to this project include ordering replacement lightbulbs for ActivBoards, troubleshooting issues with teacher laptops, converting all computers to Microsoft 2007, etc.

PARTNERSHIPS

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